```
UUU          UUU  EEEEEEEEEEEEEEE  TTTTTTTTTTTTTTT  PPPPPPPPPPPP       SSSSSSSSSSSS  YYY            YYY
UUU          UUU  EEEEEEEEEEEEEEE  TTTTTTTTTTTTTTT  PPPPPPPPPPPP       SSSSSSSSSSSS  YYY            YYY
UUU          UUU  EEEEEEEEEEEEEEE  TTTTTTTTTTTTTTT  PPPPPPPPPPPP       SSSSSSSSSSSS  YYY            YYY
UUU          UUU  EEE                     TTT       PPP        PPP  SSS               YYY            YYY
UUU          UUU  EEE                     TTT       PPP        PPP  SSS               YYY            YYY
UUU          UUU  EEE                     TTT       PPP        PPP  SSS               YYY            YYY
UUU          UUU  EEE                     TTT       PPP        PPP  SSS                 YYY        YYY
UUU          UUU  EEE                     TTT       PPP        PPP  SSS                 YYY        YYY
UUU          UUU  EEEEEEEEEEE             TTT       PPPPPPPPPPPP       SSSSSSSSS          YYY
UUU          UUU  EEEEEEEEEEE             TTT       PPPPPPPPPPPP       SSSSSSSSS          YYY
UUU          UUU  EEEEEEEEEEE             TTT       PPPPPPPPPPPP       SSSSSSSSS          YYY
UUU          UUU  EEE                     TTT       PPP                         SSS       YYY
UUU          UUU  EEE                     TTT       PPP                         SSS       YYY
UUU          UUU  EEE                     TTT       PPP                         SSS       YYY
UUU          UUU  EEE                     TTT       PPP                         SSS       YYY
UUUUUUUUUUUUUUUU  EEEEEEEEEEEEEEE         TTT       PPP             SSSSSSSSSSSS          YYY
UUUUUUUUUUUUUUUU  EEEEEEEEEEEEEEE         TTT       PPP             SSSSSSSSSSSS          YYY
UUUUUUUUUUUUUUUU  EEEEEEEEEEEEEEE         TTT       PPP             SSSSSSSSSSSS          YYY
```

```
SSSSSSSS    AAAAAA    TTTTTTTTTT    SSSSSSSS    SSSSSSSS    SSSSSSSS    888888    333333
SSSSSSSS    AAAAAA    TTTTTTTTTT    SSSSSSSS    SSSSSSSS    SSSSSSSS    888888    333333
SS          AA    AA      TT        SS          SS          SS        88    88    33      33
SS          AA    AA      TT        SS          SS          SS        88    88    33      33
SS          AA    AA      TT        SS          SS          SS        88    88            33
SS          AA    AA      TT        SS          SS          SS        88    88            33
   SSSSSS    AA    AA      TT          SSSSSS      SSSSSS      SSSSSS    888888            33
   SSSSSS    AA    AA      TT          SSSSSS      SSSSSS      SSSSSS    888888            33
        SS  AAAAAAAAAA     TT              SS          SS          SS  88    88            33
        SS  AAAAAAAAAA     TT              SS          SS          SS  88    88    33      33
        SS  AA    AA      TT              SS          SS          SS  88    88    33      33
        SS  AA    AA      TT              SS          SS          SS  88    88    33      33
SSSSSSSS    AA    AA      TT        SSSSSSSS    SSSSSSSS    SSSSSSSS    888888    333333
SSSSSSSS    AA    AA      TT        SSSSSSSS    SSSSSSSS    SSSSSSSS    888888    333333
```

```
LL          IIIIII    SSSSSSSS
LL          IIIIII    SSSSSSSS
LL            II    SS
LL            II    SS
LL            II    SS
LL            II    SS
LL            II      SSSSSS
LL            II      SSSSSS
LL            II            SS
LL            II            SS
LL            II            SS
LL            II            SS
LLLLLLLLLL  IIIIII    SSSSSSSS
LLLLLLLLLL  IIIIII    SSSSSSSS
```

SATSSS83
V04-000

C 11
SATS SYSTEM SERVICE TESTS $SETSWM (SUCC 16-SEP-1984 01:06:07 VAX/VMS Macro V04-00   Page 1
                                    5-SEP-1984 04:34:00 [UETPSY.SRC]SATSSS83.MAR;1   (1)

```
0000      1              .TITLE  SATSSS83 SATS SYSTEM SERVICE TESTS  $SETSWM (SUCC S.C.)
0000      2              .IDENT  'V04-000'
0000      3
0000      4  ;
0000      5  ;***************************************************************************
0000      6  ;*                                                                         *
0000      7  ;*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                *
0000      8  ;*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                 *
0000      9  ;*  ALL RIGHTS RESERVED.                                                   *
0000     10  ;*                                                                         *
0000     11  ;*  THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED  *
0000     12  ;*  ONLY IN  ACCORDANCE  WITH  THE   TERMS  OF  SUCH  LICENSE  AND WITH THE *
0000     13  ;*  INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER   *
0000     14  ;*  COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY   *
0000     15  ;*  OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY   *
0000     16  ;*  TRANSFERRED.                                                           *
0000     17  ;*                                                                         *
0000     18  ;*  THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE   *
0000     19  ;*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT   *
0000     20  ;*  CORPORATION.                                                           *
0000     21  ;*                                                                         *
0000     22  ;*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS   *
0000     23  ;*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                 *
0000     24  ;*                                                                         *
0000     25  ;*                                                                         *
0000     26  ;***************************************************************************
0000     27  ;
0000     28  ;
0000     29  ;++
0000     30  ; FACILITY:      SYSTST (SATS SYSTEM SERVICE TESTS)
0000     31  ;
0000     32  ; ABSTRACT:
0000     33  ;
0000     34  ;           THIS MODULE CONTAINS SUBROUTINES WHICH, WHEN LINKED
0000     35  ; WITH SUCCOMMON.OBJ, FORM TEST MODULE SATSSS83 TO TEST SUCCESSFUL
0000     36  ; OPERATION OF THE $SETSWM SYSTEM SERVICE. THE SERVICE IS INVOKED
0000     37  ; UNDER VARIOUS INPUT CONDITIONS WITH VARYING INPUT PARAMETERS. ONLY
0000     38  ; SUCCESSFUL STATUS CODES ARE EXPECTED IN THIS TEST MODULE.  CORRECT
0000     39  ; OPERATION OF THE SERVICE FOR EACH OF ITS ISSUANCES IS VERIFIED BY
0000     40  ; CHECKING FOR AN SS$ NORMAL STATUS CODE, EXPECTED RETURN ARGUMENTS
0000     41  ; AND EXPECTED FUNCTIONALITY PERFORMED.
0000     42  ;
0000     43  ; ENVIRONMENT:  USER MODE IMAGE; NEEDS CMKRNL PRIVILEGE,
0000     44  ;               DYNAMICALLY ACQUIRES OTHER PRIVILEGES, AS NEEDED.
0000     45  ;
0000     46  ; AUTHOR: THOMAS L. CAFARELLA,              CREATION DATE: JUL, 1977
0000     47  ;
0000     48  ; MODIFIED BY:
0000     49  ;
0000     50  ;     V03-001 KDM0002       Kathleen D. Morse      28-Jun-1982
0000     51  ;             Added $SSDEF.
0000     52  ;
0000     53  ; 01    -
0000     54  ;--
```

```
0000    56              .SBTTL  DECLARATIONS
0000    57 ;
0000    58 ; INCLUDE FILES:
0000    59 ;
0000    60        $PRVDEF                        ; PRIVILEGE BIT DEFINITIONS
0000    61        $PHDDEF                        ; PROCESS HEADER OFFSETS
0000    62        $SSDEF                         ; SYSTEM STATUS CODES
0000    63 ;
0000    64 ; MACROS:
0000    65 ;
0000    66 ;
0000    67 ; EQUATED SYMBOLS:
0000    68 ;
0000    69 ;
0000    70 ; OWN STORAGE:
0000    71 ;
```

```
                             E 11
          SATS SYSTEM SERVICE TESTS  $SETSWM (SUCC 16-SEP-1984 01:06:07  VAX/VMS Macro V04-00      Page  3
          DECLARATIONS                                5-SEP-1984 04:34:00  [UETPSY.SRC]SATSSS83.MAR;1       (1)

          00000000   73             .PSECT  RODATA,RD,NOWRT,NOEXE,LONG
          0000       74 TEST_MOD_NAME:: STRING  C,<SATSSS83>      ; TEST MODULE NAME
          0009       75 TEST_MOD_NAME_D: STRING I,<SATSSS83>      ; TEST MODULE NAME DESCRIPTOR
          0019       76 MSG1_INP_CTL:   STRING  I,<  SSSSM!4ZW: CONDITIONS:>
          0039       77                                          ; FAO CTL STRING FOR MSG1 IN SUCCOMMON.MAR
          0039       78 MSG3_ERR_CTL:: STRING  I,< *SSSSM!4ZW: !AS>
          0051       79                                          ; FAO CTL STRING FOR MSG3 IN SUCCOMMON.MAR
```

```
        00000000        81                  .PSECT  RWDATA,RD,WRT,NOEXE,LONG
00000008 0000           82 PRIVMASK:        .BLKQ   1                 ; ADDR OF PRIVILEGE MASK (IN PHD)
   09 01 0008           83 STATCODES:       .BYTE   SS$_WASCLR, -     ; EXPECTED
         000A           84                          SS$_WASSET        ; ... STATUS CODES
```

```
              000A      86          .SBTTL  CONDITION TABLES
              000A      87 ;
              000A      88 ;        ***** CONDITION TABLES FOR SETSWM SYSTEM SERVICE *****
              000A      89 ;
              000A      90          COND    1,LONG,<SWPFLG>,-
              000A      91                      <SWAPPING DISABLED>,-
              000A      92                      <SWAPPING ENABLED>,-
              000A      93
    00000000  003D      94                      .LONG       0       ; DISABLED
    00000001  0041      95                      .LONG       1       ; ENABLED
              0045      96 ;
              0045      97          COND    2,NOTARG,<PREVIOUS SWAP MODE>,-
              0045      98                      <SWAPPING PREVIOUSLY DISABLED>,-
              0045      99                      <SWAPPING PREVIOUSLY ENABLED>,-
              0045     100
    00000000  009A     101                      .LONG       0       ; DISABLED
    00000001  009E     102                      .LONG       1       ; ENABLED
              00A2     103 ;
              00A2     104          COND    3,NULL
              00A3     105
              00A3     106          COND    4,NULL
              00A4     107
              00A4     108          COND    5,NULL
              00A5     109
    00000000           110          .PSECT  SATSSS83,RD,WRT,EXE
```

SATSSS83
V04-000

H 11
SATS SYSTEM SERVICE TESTS $SETSWM (SUCC 16-SEP-1984 01:06:07 VAX/VMS Macro V04-00   Page 6
TM_SETUP, TM_CLEANUP   5-SEP-1984 04:34:00 [UETPSY.SRC]SATSSS83.MAR;1   (1)

```
                    0000   112          .SBTTL  TM_SETUP, TM_CLEANUP
                    0000   113  ;++
                    0000   114  ; FUNCTIONAL DESCRIPTION:
                    0000   115  ;
                    0000   116  ;            TM_SETUP AND TM_CLEANUP ARE CALLED TO PERFORM
                    0000   117  ; REQUIRED HOUSEKEEPING AT THE BEGINNING AND END, RESPECTIVELY, OF
                    0000   118  ; TEST MODULE EXECUTION.
                    0000   119  ;
                    0000   120  ; CALLING SEQUENCE:
                    0000   121  ;
                    0000   122  ;     BSBW TM_SETUP    BSBW TM_CLEANUP
                    0000   123  ;
                    0000   124  ; INPUT PARAMETERS:
                    0000   125  ;
                    0000   126  ;     NONE
                    0000   127  ;
                    0000   128  ; IMPLICIT INPUTS:
                    0000   129  ;
                    0000   130  ;     NONE
                    0000   131  ;
                    0000   132  ; OUTPUT PARAMETERS:
                    0000   133  ;
                    0000   134  ;     NONE
                    0000   135  ;
                    0000   136  ; IMPLICIT OUTPUTS:
                    0000   137  ;
                    0000   138  ;     TM_SETUP:  COND TABLE INDEX REGISTERS (R2,3,4,5,6) CLEARED;
                    0000   139  ;                ALL PRIVILEGES ACQUIRED.
                    0000   140  ;
                    0000   141  ; COMPLETION CODES:
                    0000   142  ;
                    0000   143  ;     EFLAG SET TO NON-ZERO IF ERROR ENCOUNTERED.
                    0000   144  ;
                    0000   145  ; SIDE EFFECTS:
                    0000   146  ;
                    0000   147  ;     SS_CHECK AND ERR_EXIT MACROS CAUSE PREMATURE EXIT
                    0000   148  ;     (VIA RSB) IF ERROR ENCOUNTERED.
                    0000   149  ;
                    0000   150  ;--
                    0000   151
                    0000   152
                    0000   153
                    0000   154  TM_SETUP::
            52   D4 0000   155          CLRL    R2                          ; INITIALIZE
            53   D4 0002   156          CLRL    R3                          ; .. CONDITION
            54   D4 0004   157          CLRL    R4                          ; .... TABLE
            55   D4 0006   158          CLRL    R5                          ; ...... INDEX
            56   D4 0008   159          CLRL    R6                          ; ........ REGISTERS
          FFF3'  30 000A   160          BSBW    MOD_MSG_PRINT               ; PRINT TEST MODULE BEGIN MSG
00000000'EF  00000000'EF  DE 000D 161   MOVAL   TEST_MOD_SUCC,TMD_ADDR      ; ASSUME END MSG WILL SHOW SUCCESS
   03   00  00000000'8F  F0 0018 162    INSV    #SUCCESS,#0,#3,MOD_MSG_CODE ; ADJUST STATUS CODE FOR SUCCESS
          00000000'EF     0020
                    0025   163          MODE    TO,5$,KRNL                  ; KERNEL MODE TO ACCESS PHD
   59   00000000'9F  D0 0048 164        MOVL    @#CTL$GL_PHD,R9             ; GET PROCESS HEADER ADDRESS
00000000'EF  69  DE 004F   165          MOVAL   PHD$Q_PRIVMSK(R9),PRIVMASK  ; GET PRIV MASK ADDRESS
                    0056   166          MODE    FROM,5$ ; BACK TO USER MODE
                    0057   167          PRIV    ADD,ALL                     ; GET ALL PRIVILEGES
```

```
              0077   168            $SETPRN_S TEST_MOD_NAME_D          ; SET PROCESS NAME
              0084   169            SS_CHECK  NORMAL                   ; CHECK STATUS CODE RETURNED FROM SETPRN
        05    00AE   170            RSB                                ; RETURN TO MAIN ROUTINE
              00AF   171 TM_CLEANUP::
FF4E'   30    00AF   172            BSBW      MOD_MSG_PRINT            ; PRINT TEST MODULE END MSG
        05    00B2   173            RSB                                ; RETURN TO MAIN ROUTINE
```

J 11

SATSSS83   SATS SYSTEM SERVICE TESTS SSETSWM (SUCC 16-SEP-1984 01:06:07 VAX/VMS Macro V04-00   Page 8
V04-000   CONDITION SUBROUTINES - SETUP AND CLEANU 5-SEP-1984 04:34:00 [UETPSY.SRC]SATSSS83.MAR;1   (1)

```
          00B3    175                .SBTTL  CONDITION SUBROUTINES - SETUP AND CLEANUP
          00B3    176    ;++
          00B3    177    ; FUNCTIONAL DESCRIPTION:
          00B3    178    ;
          00B3    179    ;                CONDX AND CONDX CLEANUP ARE SUBROUTINES WHICH ARE EXECUTED
          00B3    180    ; BEFORE AND AFTER THE VERIFY SUBROUTINE, RESPECTIVELY, WHENEVER A NEW
          00B3    181    ; CONDITION X VALUE IS SELECTED (SEE FUNCTIONAL DESCRIPTION OF SUCCOMMON
          00B3    182    ; ROUTINE IN SUCCOMMON.MAR). ANY SETUP FUNCTION PARTICULAR TO THE
          00B3    183    ; CONDITION X TABLE IS INCLUDED IN THE CONDX SUBROUTINE AND CLEANED
          00B3    184    ; UP, IF NECESSARY, IN THE CONDX CLEANUP SUBROUTINE. THIS INCLUDES,
          00B3    185    ; ESPECIALLY, CODE TO DETECT CONFLICTS AMONG CURRENT ENTRIES IN TWO
          00B3    186    ; OR MORE CONDITION TABLES. IF A CONFLICT IS DETECTED, A NON-ZERO
          00B3    187    ; VALUE IS STORED INTO CONFLICT, WHICH CAUSES THE CALLING ROUTINE
          00B3    188    ; (SUCCOMMON) TO SKIP THE CURRENT ENTRY IN THE CONDITION X TABLE.
          00B3    189    ;
          00B3    190    ; CALLING SEQUENCE:
          00B3    191    ;
          00B3    192    ;        BSBW CONDX   BSBW CONDX_CLEANUP
          00B3    193    ;            WHERE X = 1,2,3,4,5
          00B3    194    ;
          00B3    195    ; INPUT PARAMETERS:
          00B3    196    ;
          00B3    197    ;        CONFLICT = 0
          00B3    198    ;
          00B3    199    ; IMPLICIT INPUTS:
          00B3    200    ;
          00B3    201    ;        R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
          00B3    202    ;            FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
          00B3    203    ;
          00B3    204    ; OUTPUT PARAMETERS:
          00B3    205    ;
          00B3    206    ;        CONFLICT SET TO NON-ZERO IF COND TABLE CONFLICT DETECTED.
          00B3    207    ;
          00B3    208    ; IMPLICIT OUTPUTS:
          00B3    209    ;
          00B3    210    ;        R2,3,4,5,6 PRESERVED
          00B3    211    ;
          00B3    212    ; COMPLETION CODES:
          00B3    213    ;
          00B3    214    ;        NONE
          00B3    215    ;
          00B3    216    ; SIDE EFFECTS:
          00B3    217    ;
          00B3    218    ;        NONE
          00B3    219    ;
          00B3    220    ;--
          00B3    221
          00B3    222
          00B3    223
          00B3    224    COND1::
    05    00B3    225            RSB                                      ; RETURN TO MAIN ROUTINE
          00B4    226    COND1_CLEANUP::
    05    00B4    227            RSB                                      ; RETURN TO MAIN ROUTINE
          00B5    228    COND2::
    05    00B5    229            RSB                                      ; RETURN TO MAIN ROUTINE
          00B6    230    COND2_CLEANUP::
    05    00B6    231            RSB                                      ; RETURN TO MAIN ROUTINE
```

K 11

SATSSS83   SATS SYSTEM SERVICE TESTS $SETSWM (SUCC 16-SEP-1984 01:06:07 VAX/VMS Macro V04-00   Page 9
V04-000   CONDITION SUBROUTINES - SETUP AND CLEANU 5-SEP-1984 04:34:00 [UETPSY.SRC]SATSSS83.MAR;1   (1)

```
         00B7   232 COND3::
   05    00B7   233         RSB                        ; RETURN TO MAIN ROUTINE
         00B8   234 COND3_CLEANUP::
   05    00B8   235         RSB                        ; RETURN TO MAIN ROUTINE
         00B9   236 COND4::
   05    00B9   237         RSB                        ; RETURN TO MAIN ROUTINE
         00BA   238 COND4_CLEANUP::
   05    00BA   239         RSB                        ; RETURN TO MAIN ROUTINE
         00BB   240 COND5::
   05    00BB   241         RSB                        ; RETURN TO MAIN ROUTINE
         00BC   242 COND5_CLEANUP::
   05    00BC   243         RSB                        ; RETURN TO MAIN ROUTINE
```

L 11

SATSSS83   SATS SYSTEM SERVICE TESTS SSETSWM (SUCC 16-SEP-1984 01:06:07 VAX/VMS Macro V04-00   Page 10
V04-000   FORM_CONDS   5-SEP-1984 04:34:00 [UETPSY.SRC]SATSSS83.MAR;1   (1)

```
                        00BD    245              .SBTTL   FORM_CONDS
                        00BD    246      ;++
                        00BD    247      ; FUNCTIONAL DESCRIPTION:
                        00BD    248      ;
                        00BD    249      ;            FORM_CONDS FORMATS AND PRINTS INFORMATION ABOUT
                        00BD    250      ;    THE CURRENT ELEMENT IN EACH OF THE CONDITION TABLES.
                        00BD    251      ;
                        00BD    252      ; CALLING SEQUENCE:
                        00BD    253      ;
                        00BD    254      ;        BSBW FORM_CONDS
                        00BD    255      ;
                        00BD    256      ; INPUT PARAMETERS:
                        00BD    257      ;
                        00BD    258      ;        NONE
                        00BD    259      ;
                        00BD    260      ; IMPLICIT INPUTS:
                        00BD    261      ;
                        00BD    262      ;        R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
                        00BD    263      ;            FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
                        00BD    264      ;        FOR X = 1,2,3,4,5 :
                        00BD    265      ;                CONDX_T - TITLE TEXT FOR CONDX TABLE
                        00BD    266      ;                CONDX_TAB - ELEMENT TEXT FOR CONDX TABLE
                        00BD    267      ;                CONDX_C - CONTEXT OF THE CONDX TABLE
                        00BD    268      ;                CONDX_E - DATA ELEMENTS OF THE CONDX TABLE
                        00BD    269      ;
                        00BD    270      ; OUTPUT PARAMETERS:
                        00BD    271      ;
                        00BD    272      ;        NONE
                        00BD    273      ;
                        00BD    274      ; IMPLICIT OUTPUTS:
                        00BD    275      ;
                        00BD    276      ;        NONE
                        00BD    277      ;
                        00BD    278      ; COMPLETION CODES:
                        00BD    279      ;
                        00BD    280      ;        NONE
                        00BD    281      ;
                        00BD    282      ; SIDE EFFECTS:
                        00BD    283      ;
                        00BD    284      ;        NONE
                        00BD    285      ;
                        00BD    286      ;--
                        00BD    287
                        00BD    288
                        00BD    289
                        00BD    290      FORM_CONDS::
                        00BD    291              $FAO_S  MSG1_INP_CTL,FAO_LEN,FAO_DESC,TESTNUM
                        00DC    292                                              ; FORMAT CONDITIONS HEADER MSG
           FF21'   30   00DC    293              BSBW     OUTPUT_MSG             ; ... AND PRINT IT
         14   04   91   00DF    294              CMPB     #COND1_C,#NULL         ; IS CONDITION 1 NULL ?
              03   12   00E2    295              BNEQU    10$                    ; NO -- CONTINUE
            00CB   31   00E4    296              BRW      FORM_CONDSX            ; YES -- SUBROUTINE IS FINISHED
                        00E7    297      10$:
 00000000'EF  0000000A'EF  DE  00E7    298              MOVAL    COND1_T,MSG_A          ; SAVE ADDRESS OF CONDITION 1 TITLE FOR FAO
 00000000'EF  00000012'EF42 D0  00F2    299              MOVL     COND1_TAB[R2],MSG_B    ; SAVE ADDR OF COND 1 CURR TEXT ELT FOR FAO
    00000000'EF   04   90   00FE    300              MOVB     #CONDT_C,MSG_CTXT      ; SAVE CONDITION 1 CONTEXT FOR FAO
                        0105    301              MOV_VAL  COND1_C,CONDT_E[R2],MSG_DATA1 ; GIVE COND 1 DATA VALUE TO FAO
```

```
                    FEEC'  30  0111  302          BSBW    WRITE_MSG2              ; FORMAT AND WRITE CONDITION 1 MSG
                14    00   91  0114  303          CMPB    #COND2_C,#NULL         ; IS CONDITION 2 NULL ?
                      03   12  0117  304          BNEQU   20$                    ; NO -- CONTINUE
                    0096   31  0119  305          BRW     FORM_CONDSX            ; YES -- SUBROUTINE IS FINISHED
                             011C  306  20$:
 00000000'EF   00000045'EF  DE  011C  307          MOVAL   COND2_T,MSG_A          ; SAVE ADDRESS OF CONDITION 2 TITLE FOR FAO
 00000000'EF   00000059'EF43  DO  0127  308          MOVL    COND2_TAB[R3],MSG_B    ; SAVE ADDR OF COND 2 CURR TEXT ELT FOR FAO
               00000000'EF   00   90  0133  309          MOVB    #COND2_C,MSG_CTXT      ; SAVE CONDITION 2 CONTEXT FOR FAO
                             013A  310          MOV_VAL COND2_C,COND2_E[R3],MSG_DATA1 ; GIVE COND 2 DATA VALUE TO FAO
                    FEC3'  30  013A  311          BSBW    WRITE_MSG2             ; FORMAT AND WRITE CONDITION 2 MSG
                14    14   91  013D  312          CMPB    #COND3_C,#NULL         ; IS CONDITION 3 NULL ?
                      03   12  0140  313          BNEQU   30$                    ; NO -- CONTINUE
                    006D   31  0142  314          BRW     FORM_CONDSX            ; YES -- SUBROUTINE IS FINISHED
                             0145  315  30$:
 00000000'EF   000000A2'EF  DE  0145  316          MOVAL   COND3_T,MSG_A          ; SAVE ADDRESS OF CONDITION 3 TITLE FOR FAO
 00000000'EF   000000A2'EF44  DO  0150  317          MOVL    COND3_TAB[R4],MSG_B    ; SAVE ADDR OF COND 3 CURR TEXT ELT FOR FAO
               00000000'EF   14   90  015C  318          MOVB    #COND3_C,MSG_CTXT      ; SAVE CONDITION 3 CONTEXT FOR FAO
                             0163  319          MOV_VAL COND3_C,COND3_E[R4],MSG_DATA1 ; GIVE COND 3 DATA VALUE TO FAO
                    FE9A'  30  0163  320          BSBW    WRITE_MSG2             ; FORMAT AND WRITE CONDITION 3 MSG
                14    14   91  0166  321          CMPB    #COND4_C,#NULL         ; IS CONDITION 4 NULL ?
                      47   13  0169  322          BEQLU   FORM_CONDSX            ; YES -- SUBROUTINE IS FINISHED
 00000000'EF   000000A3'EF  DE  016B  323          MOVAL   COND4_T,MSG_A          ; SAVE ADDRESS OF CONDITION 4 TITLE FOR FAO
 00000000'EF   000000A3'EF45  DO  0176  324          MOVL    COND4_TAB[R5],MSG_B    ; SAVE ADDR OF COND 4 CURR TEXT ELT FOR FAO
               00000000'EF   14   90  0182  325          MOVB    #COND4_C,MSG_CTXT      ; SAVE CONDITION 4 CONTEXT FOR FAO
                             0189  326          MOV_VAL COND4_C,COND4_E[R5],MSG_DATA1 ; GIVE COND 4 DATA VALUE TO FAO
                    FE74'  30  0189  327          BSBW    WRITE_MSG2             ; FORMAT AND WRITE CONDITION 4 MSG
                14    14   91  018C  328          CMPB    #COND5_C,#NULL         ; IS CONDITION 5 NULL ?
                      21   13  018F  329          BEQLU   FORM_CONDSX            ; YES -- SUBROUTINE IS FINISHED
 00000000'EF   000000A4'EF  DE  0191  330          MOVAL   COND5_T,MSG_A          ; SAVE ADDRESS OF CONDITION 5 TITLE FOR FAO
 00000000'EF   000000A4'EF46  DO  019C  331          MOVL    COND5_TAB[R6],MSG_B    ; SAVE ADDR OF COND 5 CURR TEXT ELT FOR FAO
               00000000'EF   14   90  01A8  332          MOVB    #COND5_C,MSG_CTXT      ; SAVE CONDITION 5 CONTEXT FOR FAO
                             01AF  333          MOV_VAL COND5_C,COND5_E[R6],MSG_DATA1 ; GIVE COND 5 DATA VALUE TO FAO
                    FE4E'  30  01AF  334          BSBW    WRITE_MSG2             ; FORMAT AND WRITE CONDITION 5 MSG
                             01B2  335  FORM_CONDSX:
                      05   01B2  336          RSB                            ; RETURN TO CALLER
```

```
01B3   338              .SBTTL  VERIFY
01B3   339  ;++
01B3   340  ; FUNCTIONAL DESCRIPTION:
01B3   341  ;
01B3   342  ;         VERIFY IS CALLED ONCE FOR EACH COMBINATION OF CONDITION
01B3   343  ; TABLE VALUES (AS DETERMINED BY THE INDEX REGISTERS R2,3,4,5,6 FOR
01B3   344  ; COND TABLES 1,2,3,4,5, RESPECTIVELY). VERIFY ESTABLISHES THE CONDITIONS
01B3   345  ; SPECIFIED BY THE COND TABLES AND ISSUES THE SUBJECT SYSTEM SERVICE
01B3   346  ; ($SETSWM). THEN, THE SUCCESSFUL OPERATION OF THE SERVICE IS VERIFIED
01B3   347  ; BY EXAMINING THE STATUS CODE RETURNED, THE VALUES FOR RETURN ARGUMENTS
01B3   348  ; AND THE FUNCTIONALITY PERFORMED. THE EXAMINATIONS TAKE THE FORM OF
01B3   349  ; COMPARISONS AGAINST EXPECTED VALUES. ANY FAILING COMPARISON CAUSES AN
01B3   350  ; ERR_EXIT MACRO TO BE EXECUTED (EITHER DIRECTLY, OR INDIRECTLY,
01B3   351  ; THROUGH THE SS_CHECK MACRO); ERR_EXIT SETS EFLAG TO NON-ZERO,
01B3   352  ; PRINTS ERROR MESSAGES AND CAUSES AN IMMEDIATE RSB TO CALLER.
01B3   353  ; WHEN ERR_EXIT IS EXECUTED, FURTHER CALLS TO VERIFY ARE SUPPRESSED,
01B3   354  ; AND, AFTER EXECUTING CLEANUP SUBROUTINES, THE IMAGE EXITS.
01B3   355  ;
01B3   356  ; CALLING SEQUENCE:
01B3   357  ;
01B3   358  ;     BSBW VERIFY
01B3   359  ;
01B3   360  ; INPUT PARAMETERS:
01B3   361  ;
01B3   362  ;     NONE
01B3   363  ;
01B3   364  ; IMPLICIT INPUTS:
01B3   365  ;
01B3   366  ;     R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
01B3   367  ;         FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
01B3   368  ;     FOR X = 1,2,3,4,5 :
01B3   369  ;         CONDX_E - ADDRESS OF TABLE OF DATA VALUES FOR CONDX
01B3   370  ;             TABLE. IF THE CONTEXT OF TABLE X IS A SYSTEM SERVICE
01B3   371  ;             ARGUMENT, THE ARGUMENT NAME MAY BE USED AS A SYNONYM
01B3   372  ;             FOR CONDX_E.
01B3   373  ;
01B3   374  ; OUTPUT PARAMETERS:
01B3   375  ;
01B3   376  ;     NONE
01B3   377  ;
01B3   378  ; IMPLICIT OUTPUTS:
01B3   379  ;
01B3   380  ;     VERIFY HAS NO OUTPUT. SINCE ITS PURPOSE IS TO TEST FOR ERRORS,
01B3   381  ;     IT MERELY RETURNS TO CALLER NORMALLY AFTER THE TESTS, PROVIDING
01B3   382  ;     ALL WERE SUCCESSFUL; IF AN ERROR IS DISCOVERED, RETURN IS VIA
01B3   383  ;     AN ERR_EXIT OR SS_CHECK MACRO, BOTH OF WHICH DOCUMENT DETECTED
01B3   384  ;     ERRORS.
01B3   385  ;
01B3   386  ; COMPLETION CODES:
01B3   387  ;
01B3   388  ;     EFLAG SET TO NON-ZERO IF ERROR ENCOUNTERED.
01B3   389  ;
01B3   390  ; SIDE EFFECTS:
01B3   391  ;
01B3   392  ;     SS_CHECK AND ERR_EXIT MACROS CAUSE PREMATURE EXIT
01B3   393  ;     (VIA RSB) IF ERROR ENCOUNTERED.
01B3   394  ;
```

```
                         01B3    395 ;--
                         01B3    396
                         01B3    397
                         01B3    398
                         01B3    399  VERIFY::
         00000000'EF  95 01B3    400          TSTB    CFLAG                     ; SHOULD CONDITIONS BE PRINTED ?
                  03  13 01B9    401          BEQL    5$                        ; NO -- CONTINUE
                FEFF  30 01BB    402          BSBW    FORM_CONDS                ; YES -- FMT & PRINT ALL CONDS FOR THIS T.C.
                         01BE    403  5$:
                         01BE    404          $SETSWM_S COND2_E[R3]             ; ISSU PRELIM SERV TO ESTAB 'PREV' CONDITION
                         01CC    405  ;
                         01CC    406  ; ****** SYSTEM SERVICE CALL WHICH IS THE SUBJECT OF THIS TEST CASE ******
                         01CC    407  ;
                         01CC    408          $SETSWM_S SWPFLG[R2]              ; ISSUE SUBJECT SERVICE
59   00000008'EF43   9A 01DA    409          MOVZBL  STATCODES[R3],R9          ; GET EXPECTED STATUS CODE
          59      50  D1 01E2    410          CMPL    R0,R9                     ; CODE RECEIVED = CODE EXPECTED ?
                  03  12 01E5    411          BNEQ    10$                       ; NO -- GO PROCESS ERROR
                005B  31 01E7    412          BRW     VERIFYX                   ; YES -- ALL FINISHED
                         01EA    413  10$:
   00000000'EF   59  D0 01EA    414          MOVL    R9,EXPV                   ; LOAD UP EXPECTED AND
   00000000'EF   50  D0 01F1    415          MOVL    R0,RECV                   ; ... RECEIVED VALUES, THEN EXIT
                         01F8    416          ERR_EXIT LONG,<INCORRECT STATUS CODE RETURNED BY SETSWM>
                         0245    417  VERIFYX:
                     05 0245    418          RSB                               ; RETURN TO CALLER
```

SATSSS83
V04-000

C 12
SATS SYSTEM SERVICE TESTS $SETSWM (SUCC 16-SEP-1984 01:06:07 VAX/VMS Macro V04-00   Page 14
VFY_CLEANUP   5-SEP-1984 04:34:00 [UETPSY.SRC]SATSSS83.MAR;1   (1)

```
0246  420              .SBTTL  VFY_CLEANUP
0246  421  ;++
0246  422  ; FUNCTIONAL DESCRIPTION:
0246  423  ;
0246  424  ;          VFY_CLEANUP EXECUTES SYSTEM SERVICES TO UNDO THE
0246  425  ; EFFECT OF THOSE ISSUED IN THE VERIFY SUBROUTINE. VFY_CLEANUP MUST
0246  426  ; ASSUME THAT VERIFY MAY NOT HAVE EXECUTED IN ITS ENTIRETY (IF AN
0246  427  ; ERROR IS FOUND). ALSO, VFY_CLEANUP MAY ISSUE SS_CHECK OR ERR_EXIT
0246  428  ; ONLY AFTER PERFORMING ALL OF ITS CLEANUP OPERATIONS; THIS IS REQUIRED
0246  429  ; IN THE EVENT THAT VFY_CLEANUP IS CALLED DURING ERROR PROCESSING,
0246  430  ; WHEN PERFORMING THE REQUIRED CLEANUP IS MORE IMPORTANT THAN
0246  431  ; POSSIBLY DISCOVERING A SECOND ERROR.
0246  432  ;
0246  433  ; CALLING SEQUENCE:
0246  434  ;
0246  435  ;     BSBW VFY_CLEANUP
0246  436  ;
0246  437  ; INPUT PARAMETERS:
0246  438  ;
0246  439  ;     NONE
0246  440  ;
0246  441  ; IMPLICIT INPUTS:
0246  442  ;
0246  443  ;     R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
0246  444  ;        FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
0246  445  ;     FOR X = 1,2,3,4,5 :
0246  446  ;          CONDX_E - ADDRESS OF TABLE OF DATA VALUES FOR CONDX
0246  447  ;             TABLE. IF THE CONTEXT OF TABLE X IS A SYSTEM SERVICE
0246  448  ;             ARGUMENT, THE ARGUMENT NAME MAY BE USED AS A SYNONYM
0246  449  ;             FOR CONDX_E.
0246  450  ;
0246  451  ; OUTPUT PARAMETERS:
0246  452  ;
0246  453  ;     NONE
0246  454  ;
0246  455  ; IMPLICIT OUTPUTS:
0246  456  ;
0246  457  ;     NONE
0246  458  ;
0246  459  ; COMPLETION CODES:
0246  460  ;
0246  461  ;     EFLAG SET TO NON-ZERO IF ERROR ENCOUNTERED.
0246  462  ;
0246  463  ; SIDE EFFECTS:
0246  464  ;
0246  465  ;     SS_CHECK AND ERR_EXIT MACROS CAUSE PREMATURE EXIT
0246  466  ;     (VIA RSB) IF ERROR ENCOUNTERED.
0246  467  ;--
0246  468
0246  469
0246  470
0246  471
0246  472  VFY_CLEANUP::
0246  473              $SETSWM_S  #1                    ; MAKE SURE SWAPPING IS ENABLED
05 024F  474              RSB                             ; RETURN TO CALLER
0250  475              .END
```

```
$$$$              = 00000202 R    04     MOD_MSG_CODE        ********  X    04
$$$CHARS          = 00000028              MOD_MSG_PRINT       ********  X    04
$$$CHARS1         = 0000001C              MSGT_INP_CTL        00000019 R    02
$$$CHARS2         = 0000001B              MSG3_ERR_CTL        00000039 RG   02
$$$CHARS3         = 00000000              MSG_A               ********  X    04
$$$CHARS4         = 00000000              MSG_B               ********  X    04
$$$CHARS5         = 00000000              MSG_CTXT            ********  X    04
$$$COND_A         = 00000001              MSG_DATA1           ********  X    04
$$$STRINGS        = 00000001              NOTARG            = 00000000 G
$$$STRINGS2       = 00000005              NULL              = 00000014 G
$ST2              = 00000004              OUTPUT_MSG          ********  X    04
BYTE              = 00000001 G            PCV                 ********  X    04
CFLAG               ********  X    04     PHD$Q_PRIVMSK     = 00000000
CHMRTN              ********  X    04     PRIVMASK            00000000 R    03
CHM_CONT            ********  X    04     PRIV_ARGS         = 00000002
COMP_SC             ********  X    04     PROCESS_ERR         ********  X    04
CONDT               000000B3 RG   04     QUAD              = 00000008 G
COND1_C           = 00000004              RECV                ********  X    04
COND1_CLEANUP       000000B4 RG   04     REST_REGS           ********  X    04
COND1_E             0000003D R    03     SAVE_REGS           ********  X    04
COND1_H             00000011 RG   03     SS$_NORMAL        = 00000001
COND1_T             0000000A R    03     SS$_WASCLR        = 00000001
COND1_TAB           00000012 R    03     SS$_WASSET        = 00000009
COND2               000000B5 RG   04     STATCODES           00000008 R    03
COND2_C           = 00000000              SUCCESS             ********  X    04
COND2_CLEANUP       000000B6 RG   04     SWPFLG              0000003D R    03
COND2_E             0000009A R    03     SYS$CMKRNL          ********  GX   04
COND2_H             00000058 R    03     SYS$FAO             ********  X    04
COND2_T             00000045 R    03     SYS$SETPRN          ********  GX   04
COND2_TAB           00000059 R    03     SYS$SETPRV          ********  GX   04
COND3               000000B7 RG   04     SYS$SETSWM          ********  GX   04
COND3_C           = 00000014              TESTNUM             ********  X    04
COND3_CLEANUP       000000B8 RG   04     TEST_MOD_NAME       00000000 RG   02
COND3_H             000000A2 RG   03     TEST_MOD_NAME_D     00000009 R    02
COND3_T             000000A2 R    03     TEST_MOD_SUCC       ********  X    04
COND3_TAB           000000A2 R    03     TMD_ADDR            ********  X    04
COND4               000000B9 RG   04     TM_CLEANUP          000000AF RG   04
COND4_C           = 00000014              TM_SETUP            00000000 RG   04
COND4_CLEANUP       000000BA RG   04     VERIFY              000001B3 RG   04
COND4_H             000000A3 RG   03     VERIFYX             00000245 R    04
COND4_T             000000A3 R    03     VFY_CLEANUP         00000246 RG   04
COND4_TAB           000000A3 R    03     WORD              = 00000002 G
COND5               000000BB RG   04     WRITE_MSG2          ********  X    04
COND5_C           = 00000014
COND5_CLEANUP       000000BC RG   04
COND5_H             000000A4 RG   03
COND5_T             000000A4 R    03
COND5_TAB           000000A4 R    03
CTL$GL_PHD          ********  X    04
DESC              = 00000010 G
EFLAG               ********  X    04
EXPV                ********  X    04
FAO_DESC            ********  X    04
FAO_LEN             ********  X    04
FORM_CONDS          000000BD RG   04
FORM_CONDSX         000001B2 R    04
LONG              = 00000004 G
```

E 12

```
                              +------------------+
                              ! Psect synopsis !
                              +------------------+

PSECT name                     Allocation          PSECT No.   Attributes
----------                     ----------          ---------   ----------
.  ABS  .                     00000000  (     0.)  00 (   0.)  NOPIC  USR  CON  ABS  LCL NOSHR NOEXE NORD  NOWRT NOVEC BYTE
$ABS$                         00000000  (     0.)  01 (   1.)  NOPIC  USR  CON  ABS  LCL NOSHR  EXE  RD    WRT NOVEC BYTE
RODATA                        00000051  (    81.)  02 (   2.)  NOPIC  USR  CON  REL  LCL NOSHR NOEXE  RD  NOWRT NOVEC LONG
RWDATA                        000000A5  (   165.)  03 (   3.)  NOPIC  USR  CON  REL  LCL NOSHR NOEXE  RD    WRT NOVEC LONG
SATSSS83                      00000250  (   592.)  04 (   4.)  NOPIC  USR  CON  REL  LCL NOSHR  EXE  RD    WRT NOVEC BYTE

                         +----------------------------+
                         ! Performance indicators !
                         +----------------------------+

Phase                 Page faults    CPU Time      Elapsed Time
-----                 -----------    --------      ------------
Initialization             35       00:00:00.08    00:00:00.65
Command processing        133       00:00:00.69    00:00:03.39
Pass 1                    282       00:00:08.42    00:00:15.16
Symbol table sort           0       00:00:01.08    00:00:01.19
Pass 2                     98       00:00:01.81    00:00:04.76
Symbol table output        12       00:00:00.13    00:00:00.36
Psect synopsis output       3       00:00:00.03    00:00:00.04
Cross-reference output      0       00:00:00.00    00:00:00.00
Assembler run totals      565       00:00:12.24    00:00:25.55
```

The working set limit was 1500 pages.
44664 bytes (88 pages) of virtual memory were used to buffer the intermediate code.
There were 40 pages of symbol table space allocated to hold 698 non-local and 14 local symbols.
475 source lines were read in Pass 1, producing 20 object records in Pass 2.
33 pages of virtual memory were used to define 24 macros.

```
                         +----------------------------+
                         ! Macro library statistics !
                         +----------------------------+

Macro library name                      Macros defined
------------------                      --------------
-$255$DUA28:[SHRLIB]UETP.MLB;1                9
-$255$DUA28:[SYS.OBJ]LIB.MLB;1                1
-$255$DUA28:[SYSLIB]STARLET.MLB;2            11
TOTALS (all libraries)                       21
```

1005 GETS were required to define 21 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:SATSSS83/OBJ=OBJ$:SATSSS83 MSRC$:SATSSS83/UPDATE=(ENH$:SATSSS83)+EXECML$/LIB+SHRLIB$:UETP/LIB